

Appl. No. 10/661,736
Amtd. Dated Mar. 22, 2005
Reply to Office Action of January 7, 2005

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original): A backlight system comprising:

a light guide plate including a plurality of incident surfaces disposed at corners thereof; a light exit surface; and a bottom surface opposite to the light exit surface; and

a plurality of point light sources for emitting light beams disposed adjacent and opposite to the incident surfaces;

wherein, the bottom surface comprises a scattering pattern having a plurality of dots thereon, and a covering rate of the scattering pattern varies such that a light distribution density of light emitted from the light guide plate is uniform.

Claim 2 (original): The backlight system as claimed in claim 1, wherein the point light sources are light emitting diodes.

Claim 3 (original): The backlight system as claimed in claim 1, wherein the light guide plate includes four incident surfaces disposed at opposite corners thereof.

Claim 4 (original): The backlight system as claimed in claim 1, wherein a shape of the dots is hemispherical, cylindrical, rectangular, or cuboidal.

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Claim 5 (original): The backlight system as claimed in claim 1, wherein the bottom surface further comprises a reflective film.

Claim 6 (original): The backlight system as claimed in claim 5, wherein the reflective film has a reflective ratio greater than 98% for wavelengths in the range of the visible spectrum.

Claim 7 (currently amended): A liquid crystal display comprising:

a liquid crystal panel; and

a backlight including:

a light guide plate having a plurality of incident surfaces disposed at corners thereof of the light guide plate;

a light exit surface;

a bottom surface opposite to the light exit surface; and

a plurality of point light sources disposed adjacent and opposite to the incident surfaces for emitting light beams;

wherein, the bottom surface of the light guide plate comprises a scattering pattern having a plurality of dots thereon, and a covering rate of the scattering pattern varies such that a light distribution density of light emitted from the light guide plate is uniform.

Claim 8 (currently amended): The liquid crystal display as claimed in claim [[9]] 7, wherein the light guide plate includes four incident surfaces disposed at opposite corners thereof.

Claim 9 (currently amended): The liquid crystal display as claimed in claim [[9]] 7, wherein the bottom surface further comprises a reflective film.

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Claim 10 (currently amended): A backlight system comprising:

a light guide plate defining a plurality of side faces, [[and]] opposite bottom and exit faces, and a plurality of incident faces, said side faces commonly defining a periphery of said light guide plate, said incident faces being at each of corners of said light guide plate; and

a plurality of point light sources essentially uniformly dispersed along said periphery and located at said corners, said point light sources commonly directing toward a center region of said light guide plate.

Claim 11-12 (canceled)

Claim 13 (original): The system as claimed in claim 10, wherein each of said point light sources defines an effective angle range between two lines, and one of said two lines is aligned with one corresponding side face.

Claim 14 (original): The system as claimed in claim 13, wherein each of said point light sources has two neighboring point light sources, and at least one of said two neighboring point light sources defines another effective angle range between another two lines wherein one of said another two lines is aligned with said same one corresponding side face so that an area beside said one corresponding side face belongs to a higher light intensity distributing area.

Claim 15 (new): The system as claimed in claim 10, wherein each of said incident faces is derived from a cutout at the corresponding corner.

Claim 16 (new): The system as claimed in claim 10, wherein the bottom face

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comprises a scattering pattern having a plurality of dots thereon, and a covering rate of the scattering pattern varies such that a light distribution density of light emitted from the exit face of the light guide plate is uniform.

Claim 17 (new): The system as claimed in claim 10, wherein most portions of each of said light sources is located within an area of the corresponding corner which is defined by two neighboring side faces.